What is claimed is:

1. Animal-feed additives based on fermentation liquor, containing at least

   a) one or more cysteine compounds selected from the group L-cysteine, L-cystine and thiazolidines, including their salts, and

   b) from 2% to 100% of the further non-cellular ingredients of the fermentation liquor.

2. Animal-feed additives based on fermentation liquor, containing at least

   a) thiazolidines alone or together with L-cysteine and/or L-cystine, including their salts, and

   b) from 2% to 100% of the further non-cellular ingredients of the fermentation liquor.

3. Animal-feed additives according to Claim 1 or 2, wherein the thiazolidines are one or more compounds selected from the group 2-methyl-thiazolidine-2,4-dicarboxylic acid, 2-carboxymethyl-thiazolidine-2,4-dicarboxylic acid, 2-carboxyethyl-thiazolidine-2,4-dicarboxylic acid, and thiazolidine-2,4-dicarboxylic acid.

4. Animal-feed additives according to Claim 1 or 2, wherein the salts of the cysteine compounds are one or more salts selected from the group sodium, potassium, ammonium, magnesium or calcium salt.

5. Animal-feed additives according to Claim 1 or 2, containing the biomass formed during the fermentation of the cysteine-compound-producing microorganisms in an amount of from 0% to 100%.

6. Animal-feed additives according to Claim 5, containing the biomass formed during the fermentation of the cysteine-compound-producing microorganisms in an amount of >0% to ≤50% in the animal-feed additive.

7. Animal-feed additives according to Claim 5, containing the biomass formed during the fermentation of the cysteine-compound-producing microorganisms in an amount of >50% to 100% in the animal-feed additive.

8. Animal-feed additives according to Claim 1, containing cysteine compounds, including their salts, in an amount of from 1 to 98 wt.%.

9. Animal-feed additives according to Claim 1 or 2, containing one or more chemical compounds selected from the group glutathione, cystathionine, biotin, thiamin, liponic acid, coenzyme A and L-methionine.

10. Animal-feed additives according to Claims 1 to 9, wherein they are present in liquid form.

11. Animal-feed additives according to Claims 1 to 9, wherein they are present in solid form.

12. Process for the production of feed additives comprising

a) separating the biomass completely (100%) from fermentation liquors containing cysteine compounds selected from the group L-cysteine, L-cystine and thiazolidines, including their salts, and

b) optionally concentrating the mixture so obtained by removal of water.

13. Process for the production of feed additives that are low in biomass, comprising

a) separating virtually all or at least the predominant part (≥50% to <100%) of the biomass from fermentation liquors containing cysteine compounds selected from the group L-cysteine, L-cystine and thiazolidines, including their salts, and

b) optionally concentrating the mixture so obtained by removal of water.

14. Process for the production of feed additives that are rich in biomass, comprising

a) leaving all or the majority (from 100% to >50%) of the biomass in fermentation liquors containing cysteine compounds selected from the group L-cysteine, L-cystine and thiazolidines, including their salts, and

b) optionally concentrating the mixture so obtained by removal of water.

15. Process according to Claims 12, 13 or 14, wherein

c) the feed additive is produced by one or more measures selected from the group drying, spray drying, spray granulation and granulation.

16. Process according to Claims 12, 13, 14 or 15, wherein, for the preparation of the fermentation liquor containing cysteine compounds, L-cysteine-producing bacteria, fungi or yeasts are cultivated in a suitable fermentation medium.

17. Process according to Claims 12, 13, 14, 15 or 16, wherein one or more of the following steps are additionally carried out:

d) electrochemical reduction (electrolysis) of the L-cystine to L-cysteine in one or more of steps a) and b);

e) acidification with a concentrated mineral acid in one or more of steps a) and b);

f) addition of a reducing agent to one or more of steps a), b) and c);

g) use of a protecting gas in one or more of steps a), b) and c);

h) addition of an oxidizing agent to one or more of steps a), b) and c);

i) addition of one or more cysteine compounds selected from the group L-cysteine, L-cystine and thiazolidines to one or more of steps a), b) and c), the added amount of cysteine compound being such that the total concentration thereof, optionally including its salts, in the animal-feed additive is in the range from 1 to 98 wt.%;

j) addition of auxiliary substances to one or more of steps a), b) and c), for stabilization and increasing the storability, selected from the group silicas, silicates, stearates, meals, brans, cereal flours, flours; silicas, silicates, starches and sugars; or

k) conversion of the substances obtained according to c) to j) into a form stable in the animal's stomach by coating with film-forming agents.

18. Process according to Claim 17, wherein the mineral acid is sulfuric acid.

19. Process according to Claim 17, wherein the reducing agent is one or more chemical compounds selected from the group vitamin C, vitamin E, formic acid and the salts thereof.

20. Process according to Claim 17, wherein the oxidizing agent is one or more chemical compounds selected from the group oxygen (O_2) and hydrogen peroxide (H_2O_2).

21. Process according to Claim 17, wherein the protecting gas is nitrogen (N_2).

22. Process according to Claim 17, wherein the film-forming agent is one or more substances selected from the group metal carbonates, silicas, silicates, alginates, stearates, starches, rubbers or cellulose ethers.

23. Animal-feed additive produced according to Claims 12 to 22.

24. Animal-feed additive according to Claim 23, containing from 1 wt.% to 98 wt.% of one or more cysteine compounds selected from the group L-cysteine, L-cystine and thiazolidines, optionally including their salts.

25. Animal-feed additive according to Claim 2, wherein the thiazolidine content is at least 0.001 wt.% or at least 0.01 wt.% or at least 0.1 wt.% or at least traces.